Exhibit 8

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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FEDERAL HOUSING FINANCE)
AGENCY, etc.,)
Plaintiff,)
v.) 11 CIV. 6201(DLC)
NOMURA HOLDING AMERICA,)
INC., et al.,)
Defendants.)

____

SULLIVAN & CROMWELL LLP
125 Broad Street
New York, New York 10004-2498
November 13, 2014
9:35 A.M.

VIDEOTAPED DEPOSITION OF
JOHN A. KILPATRICK, PH.D., MAI, FRICS
VOLUME I

REPORTED BY:
DEBRA SAPIO LYONS, RDR, CRR, CCR, CPE

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in the Merrill Lynch deposition that you believe to be incorrect?

A. Well, I can't recall as I sit here. I have not reviewed that deposition in a while. I certainly went over it. If I missed anything when I went over it, I can't recall.

Q. Okay. But just -- just to be clear, as -- as you sit here today in this deposition, there's nothing that you know of in the Merrill Lynch deposition that you believe to be incorrect?

A. Nothing that I know of, but, again, I haven't thought of it in quite a few months and as -- as you know, a couple-of-day deposition, so if I missed anything and failed to acknowledge that on the errata that I submitted, what, about eight months ago, then certainly stand ready to correct that here.

Q. Now --

MR. RAND: I'm just going on

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the record. I don't want to muddy up the record. We can talk later. But we have an agreement I believe with Nomura about the use of Merrill deps verse the use of deps in HSBC and Goldman, but we can talk off-line. Go ahead.

BY MR. HOLLEY:

Q. Okay. You were also deposed, Dr. Kilpatrick, in the FHFA cases against Goldman Sachs, HSBC and Ally on June 30th, July 1 and July 14 of this year; correct?

A. That's correct.

Q. And you sought to make your answers in -- in that three-day deposition as accurate as you could, didn't you?

A. I did.

Q. Did you review the transcripts of the depositions that you gave in the Goldman Sachs, HSBC and Ally cases?

A. I did.

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Q. And as you sit here today, is there anything in your sworn testimony in that three-day deposition, in the Goldman, HSBC and Ally case that you believe to be in -- excuse me, incorrect?

A. Nothing that I can think of as I sit here. Of course, that was, if I recall correctly, 28 hours of deposition testimony. And as I went through it, I was certainly focused on some -- some things that I want to clear the record on, but if I missed anything in there, I think my Nomura report stands on its own. You know, I -- I -- I have -- I certainly don't recall anything that I missed, but that was a lot of deposition testimony to go through.

Q. Now, you are a licensed Real Estate Appraiser; is that right?

A. Yes.

Q. In fact, you're a licensed Real Estate Appraiser in all 50 states

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of the United States and the District of Columbia; correct?

A. Well, two caveats. Number one, the -- the term of art is "state certified" and I believe I am last I checked.

Q. Okay. Is there any reason for you to doubt that you are a State Certified Appraiser in all 50 states and in the District of Columbia?

A. No, the -- the -- no particular reason to doubt. The renewal dates are -- are not uniform through the states. They are scattered and -- and frequently not the 1st or the 30th of the month, and I have staff who keeps track of all of that for me. There -- there are occasions when one gets missed and we -- we pick that up as quickly as we can.

But to the best of my knowledge sitting here, I'm currently licensed in all 50 states and D.C.

Q. Why did you think it was

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important to be a State Certified Appraiser in so many different jurisdictions?

A. Well, my work goes all over the United States. And prior to a couple of years ago, I -- I had been licensed in a number of states, probably half or more of the states at one time or another. And when I took on the stream of cases which -- which -- of which Nomura is part, I recognized that I would be reviewing property all over the United States. Some states request or require that an appraiser reviewing appraisals done in that state be licensed in that state, some don't. And so to err on the side of caution, I simply directed my staff to get me licensed in every state rather than try to make determinations with sometimes ambiguous regulatory language about whether I needed to be licensed in a given state or not.

Q. You view yourself as a very

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experienced Real Estate Appraiser; right?

A. I think so, yes.

Q. How many real estate appraisals have you performed in your career?

A. Well, tens of thousands.

Q. When you perform a real estate appraisal, you're not just mechanistically applying formulas, are you?

A. What do you mean by that?

Q. Well, when you perform a real estate appraisal, you are exercising your own independent judgment based on your experience; correct?

A. In a -- in a formulaic manner which has to be consistent with generally accepted appraisal methodology and standards. In other words, we have a very robust body of appraisal standards, supplemental standards, guidelines, methodology with

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which an appraiser is -- is obligated to be familiar. For that reason, while we do use terms like an opinion of value, that opinion of value has to be arrived at in a manner that's consistent with mechanistic processes, if you will, that would be recognized by the appraiser's peers in the industry and -- and accepted by and utilized by that appraiser's peers in the industry.

Q. When you do a real estate appraisal, you aren't simply looking at a checklist and applying it based on thresholds that you have listed there; correct?

A. Well, I do. I mean, we use checklists all the time. We have in our firm checklists which we have to follow; and indeed appraisal standards, USPAP, provides checklists which appraisers are obligated to follow. If I were to fail to follow those checklists, I would be outside of the

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appraisals which gets done in America.

And so appraisals get done for a lot of other reasons. I happen to do a lot of litigation and so oftentimes I'll get called in and -- and a attorney will say, "We have this property in Oshkosh, Wisconsin and it's been impacted by a garbage dump across the street. You know, what's the probable impact on value as a percentage of the otherwise unimpaired value?"

Well, there's a whole host of literature, research that -- that will -- will help inform that opinion.

So I could say, "Well, all things being equal, under most normal circumstances the literature would tell us that property's probably impacted between X percent and Y percent." I've now performed an appraisal under -- under appraisal standards. I have to inform my client that this opinion of value indeed falls under the rubric of

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USPAP. I've never gone to Oshkosh, Wisconsin and viewed that property, but I have valued a property in Oshkosh, Wisconsin and I've never been there. Happened to be a hotel.

But the -- the point of it is: There are many occasions when an appraiser would -- would -- would render an opinion about value about a piece of property without having physically inspected the property.

Q. Before your focus in your career, you know, became litigation, did you do appraisals in connection with loans by lending institutions to individual homeowners?

MR. RAND: Objection, form. Go ahead.

A. A few.

Q. Okay. And in those appraisals that you did for lending institutions where individual homeowners were buying properties, did you ever do one of those without

physically inspecting the property?

A. I don't think so.

Q. Why not?

A. The supplemental standards proffered by the agencies which govern residential mortgage lending appraisal require that that be done.

Q. Now --

A. In other words, for -- for that specific kind of appraisal, that's -- that's contained in a supplemental standard.

Q. Now, focussing again on the -- on the appraisals that you performed, residential real estate transactions for lending institutions, did you inspect both the exterior and the interior of the property in connection with the appraisal that you performed?

A. Yes.

Q. Why?

A. Again, because in that very specific circumstance, which is in a --

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a federally regulated lending environment, that's contained in the supplemental standards.

And it -- it varies according to which set of supplemental standards you're -- you're adhering to. FHA, for example -- and none of these Nomura appraisals were FHA by the way, but FHA requires that you actually climb in the attic. They jokingly call it a head-and-shoulders inspection. You have to -- they literally in the FHA regs require that the appraiser insert his -- his or her head and shoulders into the attic with a flashlight and the same as --

Q. Hope there aren't any bats up there; right?

A. Same as -- and our -- you know, raccoons being more common in the south.

But -- and the same is true in the -- in the crawl space, if it's a crawl space house.

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Now, that level of -- of inspection is not required under the GSEs, but -- but it is -- it is done and I have done it because it's a GSE requirement.

Q. In these real estate appraisals that you performed for purchases of houses where there were mortgages from banks, did you rely on aerial photos or Google Maps or some other pictures in lieu of going to visit the property?

A. Not in lieu of, but certainly in addition to.

Now, at the time I got started doing this, there wasn't a Google, but there were maps which, in fact, appraisers were obligated to -- to review. FEMA flood plain maps, for example. So I would do those in the conduct of those appraisals, but not in lieu of them.

Q. Would you agree with me that two competent real estate appraisers,

these Greenfield AVMs. Now, nobody measures the R squared for individual one-off appraisals, but I can tell you that I don't think individual appraisals -- individual appraisers would suggest to you that they're able to explain 86, 87 percent of the variance in property values using heuristic one-off methods, so indeed the accuracy of the -- the Greenfield AVM speaks for itself.

Q. But can you answer the question that I asked you which -- and -- and I think you -- you remember what the question is; right?

A. Well, I believe I do. And I thought I just did. I don't mean to be silly, but that was my answer to your question.

Q. Okay. So -- so it's your testimony here today that the Greenfield AVM does a better job of valuing the Nomura subject properties than you, yourself, could do in a

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standard appraisal?

MR. RAND: Objection, form.

Go ahead.

A. And my answer is I've never really thought about me, myself, if I ran around the country and tried to value a couple of thousand Nomura properties; and -- and I'm not trying to hold myself out individually as whether I'm a better appraiser than these individual appraisers you had working for you or your -- your client had working for them, but I am holding out that the Greenfield AVM has a high degree of accuracy and a high degree of explanatory power. And so with that in mind, it -- it -- it certainly appears that the Greenfield AVM sets an extremely high threshold that I or any other appraiser would have a tough time reaching.

Q. Have you sought to market the Greenfield AVM to lending institutions based on your view that it

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does a better job than human appraisers in reaching valuations for residential properties?

A. Have I thought about it?

Q. Sure. Have you thought about it?

A. Oh, yeah, I've thought about it. I'm just not doing it.

Q. Why not?

A. Well, number one, we are kind of busy right now doing other things. I mean, we do market the Greenfield AVM, but as it happens, we've -- we've -- we're presently using it in litigation contexts, but -- and -- and certainly outside of the scope of my testimony here today, but -- but to answer your question directly, I mean, we're constantly thinking about ways in which to utilize it in other capacities, but -- but we're not doing any of that right now.

Q. Now, it's your opinion that the Greenfield AVM generates what you

call the true market value of the Nomura subject properties; is that right?

A. Did -- did I use that exact phraseology in my report?

Q. I'll represent that you did. I mean, I'm happy to get out the report if you want, but is -- is it your view that the Greenfield AVM generates the true market value of the Nomura subject properties?

A. It -- it is, yes.

Q. Okay. And in your opinion, the true market value produced by the Greenfield AVM should trump the actual price at which the Nomura properties were sold; is that right?

A. Of course.

Q. And why is that?

A. Well, I go back to the Appraisal Institute's edicts about that, that the market value is not supposed to be just a validation of the original sales price. We know that

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original sales prices even when reached at between arm's length participants may include other things. They may be representative of bidding wars. They may be representative of -- and -- and the Appraisal Institute in -- in one of its texts talks about foreshortened marketing periods, that if the normal exposure time in a market, for example, is 90 days, but this particular property only sold in nine days, then the appraiser needs to take a very skeptical eye to a selling price that was arrived at in only nine days.

If the seller has agreed to provide personal property or has agreed to pay non-market financing arrangements, buy down the points, buy down the -- the interest rate, pay the closing costs, any of those things. If there were factors about the property that the buyer did not -- did not know about and we find that out in -- in contaminated property cases, that often

there's a -- not a level of disclosure or due diligence done. Finally, what if the marketing time rather than being -- I pointed out 90 days and a -- and a property selling in nine. What if the normal marketing time is 90 days, but this property took 900 days to sell. You know, that's certainly evidence that there's a problem associated with the sale of this property.

So all of those together can point out to you reasons why a sales price needs to be viewed skeptically and the appraiser needs to arrive at an independent determination of true market value which may have little to do with the actual purchase price.

Q. Now, what work, if any, have you done to look at each of the Nomura subject properties to determine whether the kinds of things you just testified about are present, things like undisclosed contamination?

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them do. I have seen some, and I can't identify which ones they are, but I have seen some commercial AVM outputs that provide a -- a high and a low estimate, but I can't even tell you which ones those are.

Q. Why doesn't the Greenfield AVM provide a range of values as opposed to a single point estimate of value?

A. 'Cause that's not its purpose.

Q. What do you mean when you say "that's not its purpose"?

A. Its purpose is to render a -- a -- it -- its purpose is to be a tool that aids me in rendering a -- an opinion of market value, not to render a -- a range of market values, so it's -- it's not its -- its purpose.

Q. Is there any instance with regard to any of the Nomura subject properties where your opinion about the -- the value of that property

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differs by one penny from the output of the Greenfield AVM?

A. No. Not after I have taken steps to verify the statistical accuracy of the model, and not after I've taken appropriate steps to be able to utilize that tool consistent with good appraisal practice.

And I'll give you an example. I've likened my AVM to a sales adjustment grid. Well, if I'm an appraiser and I was limiting my analysis to a sales adjustment grid, I performed all the necessary steps, did all the calculations, may very well use a computer to help me do that, by the way, and -- and came out with a value at the end of the sales adjustment grid, well, why would my value opinion differ from that. I mean I've operated the sales adjustment grid. I've selected the data to go into it. I've verified that the calculations worked properly. I've done the

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reconciliation at the end. I've -- I've found the final answer at the end of the grid. And the AVM is identically the same sort of product. In other words, if I have done all of the work with respect to the AVM, I developed it, I calibrated it, I checked the statistical characteristics, I oversaw the data gathering, I oversaw the data applications within it, why would I disagree with it.

Q. Are you aware of any commercial AVM that produces a reliable determination of the reasonableness of an opinion of value about a particular property rendered by a licensed Real Estate Appraiser five or more years in the past?

A. I'm not aware one way or the other. There may be. I'm just not familiar with them as I sit here today.

Q. You can't identify one for me that meets the criteria that I just

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set out in my question?

A. No. That doesn't mean they don't exist. That just means I can't identify any as I sit here.

Q. Would you agree with me that all commercial AVMs have difficulty accounting for property specific attribute -- attributes both positive and negative that can be assessed by a licensed Real Estate Appraiser with boots on the ground on the subject property?

A. I don't know that I agree with that as a blanket statement.

Q. Do you agree with it at all?

A. Well, it's a multipart question. You're asking about all AVMs; and as I've already testified, you know, I don't -- I don't know how all AVMs work. In other words, most of them are proprietary black boxes. Mine on the other hand, I do know how it works and I do know that it's got an extraordinarily high R squared. My

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overall OLS R squared I think is 86, 85 or 86 percent. My overall OLSXY is 86 or 87 percent. Those are extraordinarily high explanatory powers, which tells me that on average my AVM is doing a much better job than boots-on-the-ground appraisers so I can at least speak to mine, that it does really, really good job.

Now, is that true of all boots-on-the-ground appraisers? No. There's some that are very, very good. I'm not -- I'm not blanket making statements about all appraisers and all appraisals. I'm just making some statements about these Nomura appraisals.

Q. Now, in connection with the supplemental report that you submitted on October 6, did you have occasion to look at the -- the survey results of Lee Kennedy's surveys of commercial AVMs?

A. Would you provide me with

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that? I don't have a copy of it in front of me and I don't have it committed to memory.

Q. Oh, you mean your October 6 report?

A. Yes.

(Exhibit 58702, Expert Report of John A. Kilpatrick, Ph.D. October 6, 2014, is marked for identification.)

BY MR. HOLLEY:

Q. So we're going to mark as Exhibit 58702 a document entitled Expert Report of John A Kilpatrick Ph.D. dated October 6, 2014.

A. Thank you.

Q. And you should feel free to look at as much of this as you like obviously, but the part I'm talking about appears to Pages 8 and 9.

A. (Reviewing document.)

Yes, I've had the opportunity to review Mr. Kennedy's work.

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Q. Okay. And did you, in the context of reviewing what Mr. Kennedy did, look at the descriptions provided by the vendors of the Real Info Inc., Collateral Analytics and two DataQuick AVMs?

A. I may have. I was more interested in the numbers than in the -- the marketing literature.

Q. Let's -- I want to turn back now to the Greenfield AVM, to your AVM.

Can you tell me how it accounts for whether one of the Nomura subject properties is located on a busy street with traffic noise?

A. The AVM?

Q. Yes.

A. The credibility assessment does that. The AVM would pick that up via the tax assessment data to the extent that the tax assessor has picked that up as a factor influencing value. In other words, I utilize tax assessment information specifically

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because tax assessors look at things like that; and if, in fact, a property being located on a busy street impacts its value, so it doesn't always, but to the extent that it does impact value, then the tax assessor would be expected to pick that up.

Now, I test to see if the tax assessor's work is statistically significant; and, in fact, I find that in 96 percent of the cases, greater than 96 percent of the cases the tax assessment data is, in fact, statistically significant, which tells me that tax assessors to the extent that influences value are picking that up.

Q. If tax assessed value is such a great proxy for market value of properties, then why do people ask for appraisals rather than just looking at the tax assessed value in the records of the county?

A. Well, for three reasons, and

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you asked me about that earlier this morning:

Number one, in not every county is that true, and of course I test and filter for that.

Number 2, as Goolsby outlined in his journal article 15 or so years ago in the Journal of Real Estate Research, tax assessment data may be unbiased, excuse me -- may be biased but inconsistent. And so one needs to make appropriate but usually monotonic adjustments to the tax assessment data in order to arrive at the -- the tax assessor's determination or the -- the appropriate determination of fair market value.

Number three, tax assessment data is usually as of one effective date, whereas the -- the need for a appraised value is as of a different effective date. So there needs to be some sort of time adjustment and that time adjustment isn't always perfectly

linear.

I said there would be three, but there's actually a fourth. There is often need to make some adjustments. Tax assessors in my investigation of tax assessment data tend to use linear extrapolations where sometimes curvilinear is more appropriate. That's why sometimes you see things like days squared in my model or negative bath adjustments to correct for the linearity in marginal prices of baths for example.

So one can use tax assessment data, but one best use it in the context of a statistically valid, tested, and calibrated model.

Q. So it's your testimony that it is by intention that in certain of the Nomura subject products -- properties the addition of a bathroom causes the value of the house to go down?

A. It is the -- there is a

negative coefficient on the bathroom adjustment to account for the non-linearity in bathroom values inherent in the tax assessment data. In short, bathrooms doesn't have a negative marginal value, it's positive at all -- all reasonable levels. But if one surmises or supposes a linear relationship between bathroom and value, then one at the margin may need to make a negative adjustment to account for the non-linearity between number of bathrooms and value.

Q. Now, and correct me if I'm wrong, but I think you said in most cases you can make sort of direct adjustments between tax assessed value, monotonic I think you said, monotonic adjustments to tax assessed value in order to get to market value. Did I understand you correctly?

A. In most instances, yeah. It's -- our model works most of the time; and certainly on average gives

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statistically robust inferences about the -- the values of these underlying Nomura properties.

The -- I'm -- I -- I think for the purposes for which I've applied this AVM, it works very, very well and is statistically very, very powerful.

Q. It's close enough in your view?

A. I don't know if I would use the word "close enough." I don't know that's got a statistical meaning. But I think it's got statistically robust characteristics.

Q. Okay. How does the Greenfield AVM account for whether a property is located down wind of an -- of an industrial facility that generates noxious gases?

A. In -- in -- again, I would expect that to be picked up by the local tax assessor and to the extent that has an impact on value, it would be picked up in the value conclusion

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that if that appraisal has a sufficient number of errors in it to accumulate a -- by my scoring I -- I use a numerical score, 20, but more to the point, if that appraisal has a number of errors in it, some egregious, some not, then that appraisal cannot be believed. It's not credible. A reasonable user, a reasonable appraiser would not believe the results of that appraisal exercise. So I'm not making judgment calls about the individual appraisers --

Q. Well --

A. -- but to the extent that their work was flawed.

Q. Well, isn't that inherent in what you're doing?

If you say that no reasonable appraiser applying USPAP and other industry standards could have believed the opinion of value delivered in 2005 or 2006, aren't you necessarily saying that they were engaged in

misrepresentation?

A. Again, I'm not -- I'm not going that far. I'm not trying to pass -- help -- I'm not trying to pass the buck from Nomura off to its appraisers and say that these appraisers were misrepresenting. I'm trying to say these appraisals misrepresented the -- the characteristics of the property. The -- and the term of art in appraisal is less than credible. In other words, these appraisals could not be believed. But I'm not appointing accusatory fingers at individual appraisers per se.

Q. Is it your expert opinion that tax assessed value is a good proxy for all positive and negative characteristics of a property that can affect its value?

A. Not always. And in fact, as I noted up front, I filter out some counties where I don't find it to be

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useful. But indeed in my model on average, it appears to work. I mean, I get statistically significant coefficients on the tax assessment value 96 percent of the time and I end up with R squareds in the high 80s in -- in both my OLS and OLSXY models. So it certainly appears to be. Statistically, it's borne out that it is on average.

Q. And putting aside the counties where you've determined that -- that tax assessed value is not a good proxy for market value, so let's just -- that's my assumption, we're going to take those counties out. For the remaining counties, is it your expert opinion that tax assessed value is a good proxy for all positive and negative characteristics of a property that can affect its value?

A. Not always. And, in fact, that's why I have some filters on comparables to make sure that I'm

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filtering out any outliers. I have a surfeit of data so why use it all. I just utilize that data that fits my model. And so it's my testimony that the tax assessment data that I use in my model works. But I'm not here to make blanket statements about all tax assessment data in all counties in the United States.

Q. Now, and the filtering that you're referring to is the cross-validation filter that the Greenfield valuation model uses?

A. Sure. I do that; and that allows me to utilize tax assessment data in a manner which fits my model and, therefore, statistically works. So I mean at the end of the day what I want is a model that's accurate on average and that's what I end up it.

Q. Isn't that -- isn't that the world upside down, Dr. Kilpatrick?

Aren't you doing something called data censoring when you take out

data observations that don't fit your model rather than changing your model so that it is explanatory of the data that exists?

A. No. And -- and I think that what we're trying to do here -- what I'm trying to do here is develop and utilize a model in the most accurate fashion possible. I'm not data censoring or cherry picking data in order to tweak individual appraisal determinations.

My cross-validation filter, for example, is something I've utilized in many, many models. Up to this point I've used it to appraise thousands of properties. I haven't changed it for Nomura. And I certainly -- I don't change it for individual properties. Is it appropriate to filter data? Yeah, of course. I mean there's a robust set of econometric tools for filtering data.

There's -- in SAS, for

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example, the common software package that's used by many econometricians, there's the robust OLS tool which filters data. There's the Cook's D statistic which filters data. There's winsoring which is very common in the biostatistics field for filtering data. There's the PRESS statistic methodology for filtering data.

In -- all of those, by the way, are very, very close to my cross-validation filter in -- in application and in fundamentals.

So remember what the purpose here is, is to have a really, really good model that on average gives an extremely accurate determination of market value for these Nomura properties. All of this filtering is designed to make this model good. And that's what I've done.

Q. Is it your testimony that the Greenfield AVM is a hedonic model?

A. Yes.

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are able to examine retrospective values.

Now, at that point the question is: Does the model work. In other words, it's not enough to simply state a model and then use it. You also have to test it. Part of our filtering exercise, of course, is to -- is to filter data that works within the confines of a model like that.

Our statistical outputs let us know that the model actually works extremely well; and, in fact, works better than other AVMs, works better than Nomura's contemporaneous AVMs.

So by retrospective valuation using data that's gathered from more recent years does a better job valuing these Nomura properties than Nomura's own AVMs done at the time of the loan originations.

Q. And is that testimony based on the middle 90 percent of the output of the GAVM or on its entire output?

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A. It's based on an apples to apples comparison with the Nomura AVM. If you go to my expert report of October 6 and turn to Page --

Q. Nine?

A. -- 9 -- that's not the page I'm looking for. Excuse me.

Q. Sorry.

A. Nine may not be the page. There was a table I produced to you, and as I sit here I can't recall whether it was in this or a subsequent report, but there's a table I produced to you where I looked at my AVM compared to the same properties valued by the Nomura AVM, and I apologize 'cause I thought it was in this report but it may be somewhere else, and I found that when you compared apples to apples properties that I valued compared to properties that Nomura had valued, you found that I had better statistical characteristics on those properties than Nomura had using their

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AVM.

Q. And just to be clear, what were you comparing in order to determine accuracy?

A. I was comparing bias, and I was also looking at the variance statistics.

Q. Okay. Now, I just want to go back. I know you've told me that you make adjustments, but I want to focus on the input, the data inputs to the Greenfield AVM.

You would agree with me, would you not, that all of the data inputs to the Greenfield AVM are contemporaneous data?

A. I can't recall the exact dates of them. They're contemporaneously gathered, but they're not all contemporaneous with the original dates of value.

Q. So, for example, the tax assessed value is all from 2010 or later; correct?

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A. Yes.

Q. And what about the other characteristics of these properties, is that data you're getting contemporaneously or are you somehow going to a source that existed only as of 2005 or '6 when the loans were originated?

A. No. We're gathering it contemporaneously.

Q. Okay. Now, what -- what study have you made to determine the direction and extent of changes in tax assessed valuation between the date that the appraisals were done for the Nomura subject properties and the date on which the tax assessed valuations were gathered for use in the Greenfield AVM?

A. Well, indirectly, again, we look at the summary statistics, the statistical properties of the AVM. In short, the fact that my AVM has such powerful predictive power that explains

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such a high degree of the variance tells us that the model works. In short, it tells us that we don't have to do that kind of study because gathering the contemporaneous data, making the appropriate adjustments, and producing the appropriate coefficients gives you a statistically powerful model.

Q. So it didn't matter to you in your analysis how tax assessed value had changed in particular counties between the time that you ran the GAVM, the Greenfield AVM, and the time that the appraisals were conducted for the Nomura subject properties?

A. Right. Why would it? I mean at the end of the day we're able to use that data to produce a statistically powerful model that on average does a -- produces values with a high degree of accuracy. So the -- the fact is the data works. The model works. As we expected it would. And

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so the fact that there may have been -- may have been some changes in certain counties doesn't impact our thinking if, in fact, we have a model that works very well.

Q. Now, you just said to me that the model worked as you expected it to work.

What did you mean by that?

A. Well, remember, I developed this model based on years of experience working with regression models and tax assessment data. So when I put this model together in the first place I expected it was going to work based on my experience as an appraiser for many, many years. I would also be careful about how I used the phrase "put this model together" because I certainly didn't just put it together for Nomura or just put it together for the RMBS litigation, but indeed this model is an outgrowth, an evolution of the hedonic modeling that I've been doing using tax

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assessment data for many, many years, predating this RMBS litigation.

So at the end of the day, I would, given my experience using tax assessment data and hedonic modeling, I would expect this model to work and low and behold it does work per my expectations.

Q. All right. Which coefficient in the OLS and OLSXY regressions adjust for changes in tax assessed value between the date that the GAVM is run and the date that the property was originally appraised?

A. Well, you got -- you have to take into account both the date coefficient, the date squared coefficient, and the coefficient on the tax assessment value itself. So all of these working together help make that adjustment. In short, I'm not isolating any one coefficient but the model itself accounts for any differences between 2010 and 2005.

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Q. I think my econometrics professor would have wanted something a little more precise than that. Which -- which coefficient is it that makes that adjustment?

A. Well, as a former professor who has taught econometrics, I would tell you that taking all these variables together allow me to make that adjustment from tax assessment values in 2010 back to a market value in 2005.

Q. Okay. And can you be any more precise about how that happens?

A. I'd have to think about it. I mean remember, this is not a causality model but a correlation model. And so to the extent we're able to measure the correlation between these variables as measured in 2010 and the values that we're interested in in 2005, this model does an extraordinarily good job of doing that. And so to get any deeper into the --

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into the bee hive, we would simply need to unpack the math of ordinary least squares, the math of determining the correlation between an array of variables and a target variable of market value.

It's -- we need to unpack the matrix algebra that goes into it. I don't want to get too mystical. I don't want to suggest to the court that there's a magic wand that one waves over it, because we're using extraordinarily well-developed ordinary least squares techniques in order to be able to take an array of variables and find the correlation between this array of variables and market value. And we do so in a highly robust fashion using time tested tools and techniques.

Q. When you say that the Greenfield AVM is not a causality model but a correlation model, can you tell me what you mean by that?

A. Yeah. I'm not trying to say

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that there's some changes in tax assessment data over time that really matter. I'm simply saying that we can use the tax assessment values in 2010 to determine what the market values were in 2005, that there's a high degree of correlation between those two.

And it kind of makes sense when you think about it. I mean, in fact, it makes a lot of sense when you think about it, because the tax assessors in a given county are not working in a void, they're not working in a vacuum. So if I'm a tax assessor in 2010 and I'm trying to determine the market value for tax assessment purposes of your property, then I'm certainly influenced by the last five years of history, right, and so what that market value was in 2005 influences the tax assessment value that I put on it in 2010. There's a -- there's a, what economists call a bit

of a Granger causality there. One tends to lead to the other. And so if I'm -- if I, John Kilpatrick, am utilizing 2010 data in order to find a correlation with 2005 values, it's not surprising that I would find that because there's a fundamental relationship between the two.

Q. In a correlation model, would you agree with me that the cross-validation filter has a very large effect in making the correlation appear larger than it otherwise would?

A. Well, it depends on how you use cross-validation filter. I mean here what I'm trying to do is filter out data that doesn't apply. The -- part of the purpose of the cross-validation filter is to get rid of sales, if you will, that -- that have nothing to do with middle-class housing.

For example, I looked at raw data pre-cross-validation filter and

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found that the house prices pre-filter ranged up to $113 million for the data that I was using, the comparable data I was using to value Nomura. Now, what's a $113 million house got to do with your $200,000.00 houses in Nomura? Nothing, right? Absolutely nothing.

So the purpose of my cross-validation filter is to get rid of data that doesn't inform my model.

And as a result of that we want a high degree of correlation and we get a high degree of correlation by removing data from the model that doesn't properly inform the model.

Q. Why don't you do that on an a priori basis before you run the model?

If you see outliers in the data, why don't you explore them and take them out?

A. Well, we do it on an a priori basis. We're just not doing it on a one-by-one heuristic basis. In

short, we established a filter. We've used this filter consistently through tens of thousands of valuations, and the filter works in order to arrive at a model that's got a high degree of correlation. And so I am doing it a priori, but I'm just not doing it heuristically. I'm doing it in a statistically valid and consistent fashion with the way I've done it before.

Q. How can you say that you're doing it a priori when you're doing it after you run the regression?

A. I'm doing it -- well, I see your point.

I have determined the cross-validation filter a priori. I run it and the model that I use to run it has been determined before I ever run the regression. So in short, I'm not cherry picking comparables in order to tweak the model. I have determined the filter long before I've ever run

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these Nomura subjects through the model.

And I'm utilizing the very same filter and the very same filtering process on Nomura that I've used for tens of thousands of other properties.

Q. Let me give you a hypothetical and explain to me why this isn't what you're doing.

I see a high correlation between rainy days and people holding umbrellas. I want to test this proposition. So I have all my graduate students go outside day after day after day and hold umbrellas up in the air. And 'lo and behold some days it rains and I want to conclude that I have, you know, established some connection between these two because there's this correlation, and I have a rule that I establish at the outset that I'm going to ignore all sunny days. Take them out. It's a rule. It's okay. I established it beforehand.

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Q. Absolutely.
A. Stretch my legs.
Q. Absolutely. You're the boss, so let's take a break.
A. Thank you.
THE VIDEO TECHNICIAN: All right then. We're going off the record. The time is 12:27.
(A luncheon recess is held.)
THE VIDEO TECHNICIAN: We are back on the record. The time is 1:10 p.m. This is the beginning of Disk 3.
THE WITNESS: Counselor, before we get started, I was thinking over lunch about this issue of contemporaneous versus retrospective that we were chatting about before lunch; and I want to make it clear that the -- the sales data that I'm utilizing is retrospective. In other words, all of the sales comps that I'm utilizing in order to value the

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model are coming from on or before the effective date of value of the original appraisal. The -- what -- what is quote-unquote contemporaneous, and I'm not sure that that's even the right word, is the tax assessment data which is coming from the 2010 to 2012 time period. That's simply what -- what is available to me.

So what my model does is the tax -- uses the tax assessment data along with other hedonic characteristics, including a time adjustment and determines how well those 2010 to 2012 tax assessment values predict sales which were retrospective to the original date of value.

So I wanted to make sure that -- that -- that I was -- I was clear that all of that was retrospective to the original date of value.

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BY MR. HOLLEY:

Q. I appreciate that clarification. Thank you.

And so just a couple more questions on this point. Is it the days and days squared coefficients of the OLS and OLSXY regressions that take account of changes in tax assessed valuation between the date that the appraisals were originally done and the date that the tax assessed values were specified?

A. Well, that's one factor. So if we have comps which are coming from the 2010-2012 time period, we're able to compute a certain number of days between the tax assessment value and the -- the original comp sales date. That then helps inform the valuation portion of the model by letting us know how much of an adjustment in terms of days and days squared need to be made between the tax assessment value for the subject and its effective date of

sale.

Q. Okay. So this may have been my misunderstanding, but I thought the days coefficient was a measure of the number of days between an origin date and the date of the sale of the property. Is that wrong?

A. I think that may be wrong, yeah.

Q. Okay. So it's your current understanding that -- that days is a measure of the difference between the -- between what and what just so I don't --

A. Between that tax assessment value and the -- the -- the dates of the -- either the sale or the valuation.

Q. Okay. All right. Let's turn to a different topic now.

What was the purpose of calculating the forecast standard deviation or the FSD of the Greenfield AVM?

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A. Well, it's a gating mechanism, if you will, that allows me to determine which of the original appraisals should be investigated for credibility.

Q. And -- and how does it -- how does the forecast standard deviation do that?

A. Well, let's presume a model for a moment where I've determined what the value of the property is. In fact, this is what I've got. The -- the literature tells us that a -- the accuracy of a model ought to be within a certain forecast standard deviation. Freddie Mac, for example, proffers a standard on forecast standard deviation. I've measured my AVM up against Freddie Mac and it measures very well. So if an original appraised value has a value such that it's above that forecast standard deviation, then it goes into my credibility determination.

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Q. Okay. You apply some filters to a 10 percent holdout set in computing what the -- what the global FSD of the Greenfield AVM is; correct?

A. That's correct.

Q. And one of those filters is something referred to as the high forecast error filter; right?

A. That's correct.

Q. And the high forecast error filter removes properties where the difference between the original appraisal value and the value generated by the Greenfield AVM is more than a hundred percent; right?

A. Correct.

Q. And the point of doing that is what?

A. Well, as you know, there are a series of filters for what -- what I refer to as the meta subjects. And the -- the goal here is to end up with a set of meta subjects which resemble, if you will, what good valuations ought to

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want to make sure I understand it.

You did not look at any of the Nomura subject properties to figure out whether the ones captured by the hundred percent forecast -- or the high forecast error filter, in fact, had data errors or incorrect matches between tax and deed data; right?

A. Well, now you're talking about Nomura subjects as opposed to meta subjects, but I've not done any separate investigation of the meta subjects in Nomura in the forecast standard deviation exercise, but I am informed by prior investigations which I performed.

Q. Okay. I'd like to talk about another one of the filters that you used in talking about -- in -- in calculating forecast standard deviation. So you also eliminated properties outside the middle 30th percentile of sales price to tax assessed value ratio; is that right?

A. That's correct.

Q. And the effect of applying that, what I'm going to call the middle 30th percentile filter, was to eliminate 70 percent of the properties in the 10 percent holdout set; correct?

A. It's roughly 10 percent.

Q. And what was, in sort of layman's terms, the reason for removing 70 -- approximately 70 percent of the properties in the 10 percent holdout set?

A. Well, again, I'm trying to get a set of meta subjects which best emulate the kind of market value transactions which would make a valid baseline for determining the FSD. The -- the -- in prior investigations and -- and, in fact, in -- yeah, in prior investigations I recognize the fact that this second filter that -- well, it's actually the third filter, would further enhance the predictive power, the -- the -- the accuracy of my

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model, put it that way.

So indeed long before taking on the Nomura process I developed these filters in order to ensure the accuracy of the process.

Q. And just -- just so I'm clear about that, when you -- in that last answer when you said before you took on the Nomura process, do you mean before you started any of the FS -- FHFA cases or before you started working on this particular one?

A. This particular one. I've been using these filters continuously for quite a few runs of my AVM and have not changed them for this.

Q. Okay. In predicting the accur -- or in assessing the accuracy of a model, do you think it's appropriate to take out data points that suggest that the model is inaccurate?

A. Well, that's sort of got the cart before the horse. In -- in

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putting together a model like this what we want to do is get something that's of optimum accuracy, the best accuracy we can possibly get. So, yes, it's highly appropriate to only utilize data in the model that enhances the model's accuracy. And this isn't an academic exercise. This is a practical exercise in order to -- to develop baseline AVM values as well as a gating mechanism for -- for determining which underlying appraisals should be investigated further. The more we can do to make that accurate, the better; right? I mean, it's not an academic exercise. I'm not trying to publish a paper here.

So in -- indeed, it -- it is -- it is not only reasonable, but it's highly recommended that I take every step I possibly can to enhance the accuracy of the model that I'm using in this Nomura exercise.

Q. It's not your testimony that there's anything wrong in terms of

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flaws with the 70, roughly 70 percent of transactions that are eliminated by the middle 30th percentile filter; right?

A. I'm not making any testimony one way or the other about them. I'm simply saying that imposing this filter allows me to utilize the best data possible and come up with a model that's got a -- a very high predictive power. That's what I want and I mean that's -- we -- we all want a model that's highly accurate. And long ago when I first started tackling this -- this exercise, I -- I recognized that these were the kinds of filters that were going to be necessary to get the optimum accuracy in the model. I've continued to use those filters throughout all of these projects and -- and continue to have a model that has a high degree of accuracy.

Q. Okay. So you still believe, as you said in your Merrill Lynch

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deposition, that the three data filters in the computation of forecast standard deviation were designed to achieve an optimum forecast standard deviation; right?

MR. RAND: I just -- my standing objection from earlier in the dep. Go ahead.

A. Notwithstanding the fact that I haven't read my Merrill Lynch deposition transcript in seven or eight months, and so I don't recall exactly what I said in there, if -- if you'd like for me to comment on anything in Merrill Lynch, I'd like to be able to read that and maybe take it in the context --

Q. Okay. Fair enough.

A. -- in which I said it.

Q. Well, based on that answer, and -- and Mr. Rand's objection, maybe I just ask the question flat out.

Is it your belief that the -- that the purpose and effect of

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the three data -- data filters used in the calculation of forecast standard deviation for the Greenfield AVM is to achieve an optimum FSD?

A. I think that's one way of phrasing it. That certainly may very well from your prior question be the way I phrased it before.

The -- again, what I'm trying to do is come up with a -- the most accurate model possible for -- for determining AVM and in this case as far as FSD is concerned, for coming up with a conservative measure of FSD as a gating mechanism for these other appraisals.

Q. Did you do any sensitivity testing to determine what would happen to the FSD of the Greenfield AVM if you removed these three filters?

A. I've looked at the -- at the 30 percent filter. It's relatively insensitive, that is to say all the way out to about 70 percent I don't see

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very much change in the FSD, maybe a percentage point in the FSD.

As far as the hundred percent filter is concerned, going to 200 percent, there's a trade-off as you know. The -- the tighter the filters, the less data you -- you end up using. So I've done some sensitivity on that. Frankly, the -- you -- you're not removing very many additional observations by relaxing the filters, but you are making some significant changes in FSD. And it's because there are some highly influential outliers out there. So -- so in -- and the short answer is of the -- the 30 percent filter, not very sensitive out to 70, and once you get out to 70 you are picking up some really hugely influential outliers which you want to -- want to leave out.

Q. You want to leave them out why?

A. Because -- and this goes

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back to some of our earlier discussions about PRESS Statistics, Cook's D, those sorts of things. Why leave in data that doesn't have anything to do with these properties? In short, as I -- I testified before the lunch break, you have middle class properties here. I mean these are 150 to $250,000.00 homes by and large, but original sales prices in the -- in the raw data set that I was working with, the highest one I see out there is 113 million. The highest tax assessment value was 440 million. Those numbers have absolutely nothing to do with valuing these Nomura properties.

I also saw as I was -- I was looking at the data a lot of transcription errors when you start getting out at the -- the very edges of the data. And -- and finally, prices are not normally distributed. They're log normally distributed. And so when we were dealing with raw prices, the

skewness in the data means that the high prices, which, again, have nothing to do with Nomura properties, have a much greater influence on the statistical characteristics than the low-valued properties.

And so it's highly appropriate to use these kinds of filters in order to get rid of stuff that's out there under the -- the -- the -- the highly influential outliers so that I can just deal with a set of -- of data that better represents the -- the Nomura properties.

Q. Why didn't you filter the CoreLogic data at the outset so that you were only looking at transactions between 150 and $250,000.00?

A. Because I believe the filtering process that I used was -- was certainly well-established in the literature. I've already cited several different not dissimilar kinds of filtering that -- that are -- are

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common in the econometric literature.

The -- I mean, quite frankly, I think that the way I filtered this data results in a highly accurate model with little need for any other kind of filtering.

Q. Now, in your October 6th report which I think is in front of you there, you computed forecast standard deviation for each individual Greenfield AVM regression; right?

A. Well, would you point to me to the page you're referring to?

Q. Sure. Find my copy. Now I'm not seeing it. It's in here somewhere. I may have misspoken about whether you discussed this, but you -- you have done a computation of the FSD for each of the regressions of the Greenfield AVM regressions as opposed to a global FSD.

A. Point to me to what you're talking about. I want to make sure we're using the --

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Q. All right. Well, it may not --

A. -- we're using the term the same way.

Q. -- it may not be worth the time.

Isn't that what you're doing in -- in Table 3?

MR. RAND: This is unorthodox. I want to move this along though, so Page 2 is where he's talking about it.

MR. HOLLEY: Okay.

MR. RAND: If that helps you. Okay?

MR. HOLLEY: All right.

MR. RAND: I don't mean to direct traffic --

MR. HOLLEY: No, no, it's --

MR. RAND: -- but it's a limited dep --

MR. HOLLEY: Fair enough. Fair enough.

MR. RAND: -- and so just

keep moving along. If -- so I'll leave it to you now, but Table 3 on Page 2 lays it out.

MR. HOLLEY: But it is Table 3 where he -- where he --

MR. RAND: Well, I don't want to -- I don't want to testify --

MR. HOLLEY: Okay. All right. Okay.

MR. RAND: So let me stay out of it, all right, but I'm trying --

MR. HOLLEY: Maybe we should both shut up.

MR. RAND: -- I'm try -- I'm trying to help you.

A. All right. So I'm in my -- I'm in my November -- my October 6 report.

Q. Right, right.

A. And let me just read what I did here.

Q. Sure.

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A. (Reviewing document.)
MR. RAND: Just so you know what's going on, he just did one two days ago, I think he's -- but anyway, I leave it to you all.
A. Yeah, so -- so I'm -- I'm -- I'm computing a 90 and 95 percent confidence interval, but not an FSD --
Q. Okay.
A. -- for each one of these. That's -- I think that's where the confusion lie.
Q. Gotcha. Okay. And why did you do -- why did you do that additional analysis?
A. Well, I mean, number one, I wanted to -- to point out that my FSD is actually a more conservative measure, but number two, it helped me -- it helped inform my LTV recalculations.
Q. Okay. And how did it do that?
A. Well, if you go to Page 4,

and I'm referencing Table 1 here, "Table 1 demonstrates that, even if analyzed at Dr. Hausman's proposed 95 percent confidence level, 96.7 percent of these Nomura subject properties had LTV ratios over 80, 76.4 percent had LTV ratios above a hundred, although Nomura represented in its loan tapes and the applicable offering materials that no loans were above 100 LTV."

Q. Okay. So that -- this is -- this para -- the sentence you just read is how you applied the confidence level analysis you did to LTV ratios?

A. Yes.

Q. Okay. Now, you didn't use either of the high forecast error filter or the middle 30th percentile filter that you used when validating the Greenfield AVM when you were choosing comparables to use in valuing the Nomura subject properties; right?

A. That's right.

Q. And why -- was why not?

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A. Well, the -- the two filters you just mentioned we used to help winnow out the meta subjects. That's the only place they were used was in the determining the meta subjects.

Both for the comparables used in valuing the original properties as well as the meta comparables used in the FSD determination, the principal filter I used was the cross-validation filter.

Q. But you would accept the proposition, would you not, that there are certain occasions when something caught in the validation exercise by the high forecast error filter or the middle 30th percentile filter, that property ends up getting used in the valuation exercise in -- in the -- in running the Greenfield AVM?

A. I don't know that I would agree or disagree with it. I haven't done that. I'm -- I don't recall having done that investigation.

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Q. Well, have -- have you reviewed any of the expert reports submitted by Nomura where that observation is made?

A. I may have. I -- I just don't recall as I sit here. If you'd like to show me the report and let me take it in the context in which it was written, I'd be glad to refresh my memory.

Q. Okay. Well, it's probably not worth the time, but as you sit here today, you don't have -- you don't have knowledge one way or the other whether properties that were removed from the validation exercise by the high forecast error filter or the middle 30th percentile filter ended up being used in the Greenfield AVM to value the Nomura subject properties?

A. Don't have a recollection one way or the other. It wouldn't bother me if it did, but I just don't have a recollection of it.

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Q. Okay. What is the purpose -- and I don't -- I know we've talked about the cross-validation filter before, but I don't think we've touched on this point.

What is the purpose of applying a cross-validation filter as you do in the Greenfield AVM?

A. Well -- and, again, the cross-validation filter is applied to the comps as well as the meta comps. And if -- as I've already pointed out, these -- these, several times here, these Nomura properties are basically middle class properties. And so why would I use comps which aren't predictive of that? In short, I'm -- I'm doing this sort of cross-validation filter to help me get the most accurate AVM I possibly can. I mean, that -- that is the goal here. And if I find that using this kind of cross-validation filter allows me to remove comps that aren't the best

predictive of value, then that sort of filter is -- is -- is appropriate in this kind of exercise.

Q. Okay. And are -- are there particular academic articles or books or things you're relying on when -- when you say that it's appropriate to use this sort of cross-validation filter in the Greenfield AVM?

A. Well, implicitly so. I mean, appraisers are -- this is an appraisal exercise, and appraisers are directed to use the best comps possible. I mean, if I was appraising a $200,000.00 house and I went out and got 113 million dollar comps, I -- I -- I don't think anybody would accept the credibility of my work.

And so any appraiser is taught to get comps which are best suited for the -- for the subject at hand. Remember that's what we're doing here is choosing comps. And so the cross-validation filter allows me to

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choose the comps which best work with the model that I'm -- I'm -- I'm utilizing. Let me give you another example.

Let's assume for a moment that I'm appraising a single family detached residence, but I go out and gather comps that are only commercial office buildings. Well, those aren't the sort of comps that fit that model. So I have a model here and I want to choose appraisal comps which fit my model in order to have the most accurate model possible. So inherent in all appraisal instruction is this notion that we're going to get comps that, A, best fit the model, and -- and, B, best fit the subject which we're trying to value.

Q. Okay. Are you aware of any commercial AVM that removes properties as comparable -- as comparables because the AVM does a less than adequate job of predicting the market value of those

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properties?

A. I don't know because these are all, you know, proprietary black boxes. In other words, they may, but I -- I -- I mean we don't know because we don't have access to their code.

Q. Okay. What tests did you do of the outputs of the Greenfield AVM without applying the cross-validation filter?

A. I frankly can't recall.

Q. Okay. You -- I think you've testified today that the Greenfield AVM is the product of -- of years of work. Is that fair?

A. Yes.

Q. In the course of developing the Greenfield AVM, what third party -- independent third parties have tested it?

A. Well, I don't know if we're using the word "test" in the same context. I've used my Greenfield AVM in litigation and I've exposed it in

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appraisal without credible support, there is significant evidence in the appraisal literature and community that appraisers were under significant pressure to issue biased appraisals during the relevant time period. Indeed, as detailed below, a number of appraisers who conducted original appraisals on the sample Nomura properties petitioned the Appraisal Subcommittee for relief from pressure related to bias."

So while I -- I have not attempted to connect the dots between Nomura loan originators, Nomura lenders and the Nomura appraisers, I mean there was evidently lots of pressure at the time and evidently some of your appraisers said that they were receiving pressure.

Q. Okay. But just -- just so we're on the same page, you cannot, as you sit here today, testify that any of the appraisers who delivered appraisals

you say are overstated of the Nomura subject loans were ones responding to pressure from brokers or lenders to raise the value opinions they offered?

A. I believe there were some, yeah. I mean, in other words, I'm not saying that they pointed a finger at Nomura lenders, but I believe that some of your appraisers were signers of that petition.

Q. Are they the people who appraised the loans that you have said are overstated?

A. I believe so, yeah. That should be in my work file.

Q. And are you offering an opinion that, in fact, those people did in this particular instance respond to pressure from brokers or lenders to increase the value opinions that they offered about the Nomura subject properties?

A. No, as I've already testified, I -- I'm not able to connect

those dots.

Q. Would you agree with me that even if an appraiser makes a substantial error as that term is used in USPAP in performing an appraisal, that doesn't mean that the appraiser communicated a report that the appraiser knew to be misleading or fraudulent?

A. That's right. Those are two separate portions of USPAP. In other words, you could -- you could not make any errors in the analysis, which is you're citing USPAP Standard Rule 1-1(b), you could not violate 1-1(b), but nonetheless communicate the report in a fraudulent manner. On the other hand, you could -- you could violate 1-1(b), but still not be fraudulent in the transmission of the report.

Q. And you don't have any way of knowing as you sit here today whether the flaws that you see in the appraisals of the Nomura subject

properties are the result of errors that are innocent as opposed to misconduct in the sense of -- of offering a report that you know to be misleading?

A. Well, you got the word "innocent" in there, Counselor. USPAP doesn't recognize the word "innocent." It just says we're not supposed to make errors; and if you make one egregious error or a series of minor areas which -- which kind of add up to an egregious error, then you've -- you've rendered an appraisal in a less than credible fashion. It's -- USPAP is silent whether that was quote-unquote innocent or not.

As a -- as an appraiser we have a duty to conduct our work in a -- in a diligent and accurate fashion. And so we had -- our appraisal report has to -- has to be accurate. It has to withstand tests of accuracy and credibility. So that concept of an

innocent error, it's an error. You're not supposed to make it. And if you make a whole series of small errors or one big error, you've rendered an appraisal in a less than credible fashion.

Q. You've made errors in appraisals; right?

A. I have.

Q. You didn't do that intentionally, did you?

A. I would hope not. I don't recall making any intentional errors, but my appraisal report still had to withstand any error that I made. And so if I, John Kilpatrick, had issued a report that had an egregious error in it, then that appraisal report would be less than credible.

And -- but I'm not personifying these things. I'm not saying Bill Smith appraiser is -- is being called to task. I'm simply saying that the appraisal report for a

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given report, 123 Elm Street, has a credibility issue. I'm not -- I'm not concerning myself with who authored it.

Q. Right.

A. I'm not turning that person into his or her state licensing board. I'm simply saying this appraisal report either has such an egregious error or such a series of errors that this appraisal report can't be believed.

Q. Right. And you're also not putting yourself in the head of these appraisals -- appraisers and saying that they didn't subjectively believe the opinions of value that they offered in the appraisals you attack; isn't that right?

A. Well, it's a fine line. I'm saying that a reasonable appraiser couldn't believe these appraisals. And by the way, it's not an attack. It's just a credibility assessment. I mean, I'm not attacking anybody. I'm just saying, look, either the appraisal is

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right or it's wrong. If it's wrong, it's wrong because a reasonable appraiser couldn't believe it.

Now, if the original appraiser is -- is -- is one of those credible appraisers, one of those reasonable appraisers, then one might make the inference that that reasonable appraiser couldn't believe his or her own work at the time he issued it, but I'm not leaving out the -- the option that that appraiser might not have been a reasonable appraiser, that you guys might have hired some appraisers who just didn't know what they were doing.

Either way, a reasonable appraiser couldn't believe this stuff, but I'm not trying to -- I'm not a psychologist or a soothsayer. I'm not getting in the heads of these appraisers and trying to tell you what they -- what they believed. I'm simply saying if they are a reasonable appraiser, they couldn't believe this

stuff.

Q. Okay. Now, I don't want to spend a whole lot of time on the mechanics of the Credibility Assessment Model 'cause I think you've covered that in the Goldman Sachs deposition, but as I understand it, there are 31 questions in the Credibility Assessment Model and you assigned various values to those questions; is that right?

A. That's right.

Q. Okay. And the questions you say are derived from USPAP, but you don't say that you can find any one of them in terms in USPAP; correct?

A. Well, sure. I mean, USPAP gives a series of what we might think of as quality standards. For instance, I'm not supposed to commit an egregious error, and that doesn't list out all the possible errors. It just says I'm not supposed to commit an egregious error. It says I'm -- in 1-1(a) it says I'm supposed to follow the

methodology that would be recognized by and accepted by my peers in the industry, but it doesn't detail what that methodology is.

What it does is it expects me as an appraisal reviewer to reference back to the kind of methodology which I know to be taught to these appraisers in the course of their licensure.

Q. Okay. But if I went to try to find in -- in -- in the -- the USPAP rules or advisory opinions, the text of the questions in the -- in the Credibility Assessment Model, I wouldn't find any of them; right?

A. No, you wouldn't. And if you were to pull Fannie Mae's review form, you wouldn't find those questions in it either. I mean, I mean, quite frankly, there are lots of review forms out there. There are other automated review models. There -- mine, I can't speak to the other ones, I can speak to

mine. Mine has questions all of which tie back to USPAP. In other words, each one of these questions, which is formulated based on how I as a USPAP instructor would teach and evaluate real estate appraisal, each one of these has its basis in USPAP and each -- in other words, each one of these questions derives from a violation of USPAP, but, no, that -- the -- the specific phraseology, the specific questions are not in USPAP.

Q. Has the Credibility Assessment Model been used outside the context of the FHFA litigation?

A. Well, yes and no. I mean there are other Credibility Assessment Models that have been. I've done real estate appraisal review using points, questions, bullet points, if you will, that are not dissimilar to this. But this very specific formulation, this exact wording so to speak was written down by me at the -- when I tackled

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this litigation because I knew that I was going to be reviewing thousands and thousands of appraisals. And so in order to do that, I had to let -- I had to add a certain layer of automation to what I was doing and -- and that meant that I had to write everything down in -- in this kind of fashion.

So certainly I've used these questions to evaluate appraisals in the past, but not necessarily in exactly this form.

Q. Are you aware of any other Credibility Assessment Model in the industry that has been used to call into question the credibility of appraisers?

A. Appraisers or appraisals?

Q. Appraisers.

A. I don't know. I mean, there -- when I first put this together, I -- I was looking at FNC's model, which just like all the other black boxes, you can't dig too closely

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into it. Since that time about six or eight other models have popped up out there that -- that measure credibility of appraisals.

Again, they're all black boxes. I can't pry -- pry them open, but I mean that's kind of what they all do is assay the credibility of an appraisal. Now, you're personifying it to the appraiser. I'm not going quite that far, but whether somebody uses it for appraisers or appraisals, I -- I mean I can't tell you.

Q. Okay. Your Credibility Assessment Model has not been peer reviewed by anyone in the real estate appraisal industry; is that right?

A. I think that it -- depending on what you mean by peer reviewed, but I think that's fair to say, yeah.

Q. Now, in deciding whether appraisals are credible as of the time they were delivered back in '05 and '06, you -- you use something called

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the Reasonable Appraiser Standard; right?

A. Well, sort of. I wrote down the 31 questions and then I said, you know, I'm going to have to explain to people where these come from and so there was a certain amount of reverse engineering. I didn't start with the Reasonable Appraiser Standard and then derive from that a series of questions. I had already derived the questions because they were based on my experience as a USPAP instructor, reviewer and an appraiser.

But in the process of explaining where these questions come from and -- and why some of them are scored more seriously than others, I recognize the fact that the Reasonable Appraiser Standard was a -- was a -- a handy way of explaining it to people.

Q. Okay. So the Reasonable Appraiser Standard is -- is effectively a term that you coined to explain what

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you were seeking to achieve with the 31 questions in the Credibility Assessment Model?

A. No. Reasonable Appraiser Standard is actually used in some literature out there. I've -- I mean, it's -- it's -- I didn't coin it. I mean, I wish I had, but it's actually captured in some writings out there.

Q. And in the -- in the writings in the appraisal field that use that term, do they use it in the same way that you do?

A. I believe so, if I -- if I recall correctly, yes.

Q. Okay. Now, and this is on Page 45 of the -- of what I'll just for shorthand call the CAM report. You write that, "The Reasonable Appraiser Standard can be used to evaluate whether a reasonable appraiser adhering to USPAP and reasonable appraisal practices could have believed the appraisal at the time."

supposed to have that sort of errors.

And number two, I don't say always, I just say frequently. I don't even say the plurality of times. Just say -- and I offer that up as an example of why that sort of thing is in USPAP and why it's something that we would look for.

Q. And -- but here you're speaking about an appraiser, right, not an appraisal. How is this statement consistent with what you told me earlier this afternoon which is that you're not seeking to cast aspersions on particular appraisers?

A. Well, I'm not -- first thing first. I'm not measuring the appraisers. Note that nowhere in here do I name these appraisers. I'm not turning them over to their state licensing boards or anything like that, but this particular footnote is offered up as an example of how that error may occur. No mistake about it, errors

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occur either intentionally or unintentionally by appraisers, but I'm not talking about the appraisers per se. I'm talking about the product of the appraiser's work.

Q. Are you aware that both Fannie Mae and Freddie Mac maintain lists of appraisers who are not permitted to submit appraisals?

A. Anecdotally. That is to say I mean I've -- I've heard of it, but I'm not familiar with it. Doesn't have anything to do with the work I do.

Q. Okay. So I take it that you made no effort to see whether the appraisers who rendered the appraisals that you say are not credible ever appeared on those lists of appraisers maintained by Fannie and Freddie of appraisers not permitted to submit appraisals to them?

A. Of course not. It wouldn't be germane to the work I was doing here.

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Q. I -- looking at Page 66 and 67 of your CAM report which I think is in front of you, you say at the carry-over paragraph there that the weighting of each category of -- of questions in the CAM varies according to its differential impact on the credibility of an appraisal.

Do you see that, sir?

A. Yes.

Q. Is there such a weighting system in USPAP for determining whether particular kinds of appraisals have a particular impact on the credibility of that appraisal?

A. No.

Q. So how did you come up with this categorization of differential impacts on credibility?

A. Various sources.

Q. Can you tell me anything more about it than that?

A. Well, sure. If we look at category three -- well, excuse me,

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Aspect 3 of the Appraisal Process and we look at the eight categories within Appraisal Process, you'll note that they're all equally weighted. Those -- that list of eight comes directly from a table in the textbook "The Appraisal of Real Estate." In that table they're all equally weighted. If we go up to the Reasonable Appraiser Standard, well, accuracy is -- is -- is more highly touted, more highly regarded in the literature than completeness, objectivity and trustworthiness. Don't get me wrong, trustworthy, objective and complete are all stressed and that's why the Reasonable Appraiser Standard is the -- is the -- the -- the leading aspect weight here, but accuracy I think is -- is better captured in the appraisal literature. In fact, many years ago before the word "credible" was adopted into USPAP, frequently the word "reliable" was used. And so when I note that within

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each aspect, the contributory weight totals up to 1, so I recognize that these are the four categories of Reasonable Appraiser and accurate ought to be more than the other three, so I simply weighted it twice as much as the other ones.

If you go down to Impact on Value, Aspect Weight 4, Direct Indirect, Supportive, clearly Direct is going to be more, Indirect's going to be less and Supportive is going to be less than that. So I -- I gave it this three to -- three to one ratio between Direct and the other two, and then a four to one ratio between Indirect and Supportive.

Q. You would agree with me, would you not, that two different real estate appraisers both applying industry standards could have a different view about the impact of a given error on the credibility of the appraisal being reviewed; right?

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would be taught in their market analysis course.

Q. Okay. And -- and does -- does USPAP say anything about the slope of that trend line, what it has to be before a market is -- has a particular property value trend?

A. No.

Q. Again, tell me if I'm wrong, but the way I understand the R code, the source code of the Credibility Assessment Model, it assumes that any market in which property values are either increasing or decreasing by less than 4 percent annually is a market that's stable; and if the increase or decrease in values is greater than 4 percent, then the trend is either increasing or decreasing.

A. That's right. And we give it that 4 percent to give the sort of leeway that we talked about, the fudge factor. In other words, if you had a -- a market trend that was zero,

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there's no change in -- in median prices over four quarters, then we could say that market was stable. What if it's going up by a tenth of a percent a year or a half a percent or 1 percent? I mean arguably that's an increasing market. And if the appraiser reported stable but it's actually going up by 1 percent, well, that's not -- that's not stable, is it? That's increasing.

(Mr. Rand is present.)

A. But rather than put the threshold that close, I give it 4 percent either way which is not an unreasonable measure. That's twice the level of inflation that we've seen over the last few years.

And so -- and -- and by the way, there is a reason for me using 4 percent. I presented a paper at the American Real Estate Society meetings a couple of years ago that showed if you go all the way back to 1946 property

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prices on a nominal basis have gone up 2 percent plus inflation annually, so 4 percent is about 2 percent plus inflation.

So I give them that much leeway up or down. If they're, you know, outside of that bound, then that's a finding with respect to that question.

Q. Okay. So the -- the 4 percent number that you picked for determining the boundary between stability and increasing and decreasing markets comes from this historic notion that property values increase 2 percent annually?

A. Well, it's not a notion. It's the empirical findings using price trend data, FHFA price trend data.

Q. Got it. That 4 percent threshold is not in USPAP, is it?

A. No, but remember, USPAP doesn't contain any of these thresholds. USPAP just says an

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appraiser is supposed to be familiar with and utilize appropriate appraisal methodologies. So if the appraiser was taking a course in market analysis, developing this kind of trend line is exactly what he or she would be taught. And that sort of threshold would certainly be a reasonable measure given the fact that even a 1 percent differential could arguably be wrong in this case, but we are giving them four percentage -- well, a total of eight percentage points, four percentage points either way of leeway in order to measure correct or incorrect.

Q. So if -- if the appraiser -- the appraisal, excuse me, that's being reviewed says that the property -- that the value trend is stable, but it turns out based on the computation in Question 8 that it's actually increasing at 4.125 percent, that appraisal fails this question?

A. That's correct.

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Q. And -- and that -- based on that tiny disparity, the appraisal gets more than one-quarter of the points necessary to be determined non-credible?

A. Sure. I think --

MR. RAND: Object to the form. Go ahead. Sorry.

A. Sure. I think that any reasonable appraiser would recognize that's one of the series of errors envisioned under USPAP Standard Rule 1-1 Charlie, so 1-1(c). So if you -- if you -- if you only miss Question 8, one error, that doesn't render the appraisal less than credible. But if you -- if you make a series of errors like that, if the appraisal, not the appraiser, but the appraisal has -- has such a series of errors, then it's not unreasonable that after four such errors this appraisal is -- has reached the point of not being believable anymore.

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Q. So it's your testimony that if I miss -- I. I should say if an appraisal misses these thresholds even by, you know, the width of a hair, that -- that those four misses could render the appraisal non-credible?

A. Well, this isn't the width of a hair. Remember this is -- I'm giving them eight percentage points, four on either side of zero as a -- as a -- a bound so to speak. So there -- there's a lot of -- of target area, the -- the bull's-eye for this target is very, very wide. If they -- if they miss the -- they got to miss the target entirely for that question to be scored against them, against it. Excuse me.

Q. So going back to my hypothetical where the appraiser said that the market was stable, but your computation in Question 8 shows that the market is appreciating by 4.125 percent, and, therefore, they fail Question 8, what impact would that have

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signature, presses send and the document gets send off to Nomura. This is highly mechanistic. It's supposed to be highly automated. You got to work at making -- at making errors with this stuff.

And so when you -- when you accusatorially say that this is a -- assumes a highly mechanistic process, it's supposed to be mechanistic.

Q. How -- how do you square the testimony you just gave me with the interagency guidelines we looked at this morning which say that -- that you can't do what you just said?

A. I'm telling you -- number one, I'm not -- I don't have the interagency guidelines in front of me, but if I recall correctly our testimony was that the interagency guidelines said you couldn't use an automated valuation model. They didn't say you couldn't use a computer-assisted model, and that's exactly all this is. It's

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highly mechanized.

Q. So it's your testimony that most residential real estate appraisals occur with people doing drive-bys taking pictures on their cell phones?

A. I'm not going to say most. I am going to tell you there's a -- there -- there's a lot of software out there that's being sold to appraisers to do precisely that. The -- I mean, there are a number of competing companies. I cited Alamo just a second ago. And it's -- it's not Alamo, it's Alamode, A-L-A-M-O-D-E. They're trying to make this as automated as possible. So appraisers are using common data sets and they're using apps on their cell phones and apps on their iPads to the point where I mean nobody owns a typewriter anymore. And so the point of it is, this is -- this is nowadays as automated as they can possibly make it. So to -- to -- to suggest to me that I'm assuming a mechanistic

process, I'm not making any assumption, it is mechanistic.

Q. And is it your testimony that it was equally mechanistic in 2005 and '6?

A. It was not equally mechanistic back in those days. I'd say it's more mechanistic today. Nonetheless, there was a high degree of mechanistic during that time frame.

Q. Let's look at Question Number 9. Now I'm on Pages 75 and 76. Question 9, score 5.24. "Did the appraiser report marketing time correctly?"

And my first question is: Is there any test in USPAP that I can go look to to see whether an appraiser has reported marketing time correctly?

A. No. USPAP is silent to specific tests. It simply assumes that the appraiser is going to be familiar with the appropriate methods as outlined in 1-1(a).

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Q. Okay. And just -- I just want to -- sorry to re -- re-track a little bit. But as I understand it, as to Questions Number 7 and 8 that we just discussed, you had people assisting you make these determinations based on how the code in the model ran, is that -- is that what happened?

A. It is, but remember I wrote the code. I set the -- the -- the boundary conditions, and I also directly supervised my staff both in the conduct of this as well as in the quality control of this.

Q. Okay. So let's turn back to Question Number 9.

As I understand what's happening, the Credibility Assessment Model calculates an average number of days on the market by totaling the number of days on the market for all listings in the county in the previous four quarters and then divides that total number of days on the market by

the number of unique listings.

A. Was it county or market area? I'd -- I'd have to go back and check. It may have been the market area as reported by the appraiser.

Q. Okay. All right. I can -- I'll accept that clarification. But -- but with that change, what we're doing is calculating an average number of days on the market by totaling the number of days on the market for all listings in the market area in the previous four quarters and then dividing that total number of days by the unique number of listings?

A. Yes.

Q. Okay. And then the Credibility Assessment Model in Question 9 has three buckets for the resulting average number -- sorry, four buckets, that's my mistake, in which to place that resulting average number of days on the market.

So if it's less than 91

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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FEDERAL HOUSING FINANCE)
AGENCY, etc.,)
Plaintiff,)
v.) 11 CIV. 6201(DLC)
NOMURA HOLDING AMERICA,)
INC., et al.,)
Defendants.)

____

SULLIVAN & CROMWELL LLP
125 Broad Street
New York, New York 10004-2498
November 14, 2014
9:43 A.M.

CONTINUED VIDEOTAPED DEPOSITION OF
JOHN A. KILPATRICK, PH.D., MAI, FRICS
VOLUME II

REPORTED BY:
DEBRA SAPIO LYONS, RDR, CRR, CCR, CPE

rights, pass the witness.

[redacted]

MR. HOLLEY: Fair enough.

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E X A M I N A T I O N

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BY MR. HOLLEY:

Q. Dr. Kilpatrick, you recently submitted a revised errata sheet for your deposition in the Goldman Sachs-HSBC case; correct?

A. Yes.

Q. Okay. I'd like to mark as Exhibit 58706 that errata.

(Exhibit 58706, three-page document consisting of Acknowledgment Of Deponent and Errata Sheet of John A. Kilpatrick, Ph.D., MAI, FRICS, is marked for identification.)

BY MR. HOLLEY:

Q. I could give you the entire transcript, but I'm not sure that's necessary. And I'll just ask you if -- if this page entitled "Errata To the Deposition of John A. Kilpatrick" dated 6 November 2014 and apparently signed by you is that errata.

A. It is.

Q. Okay. Can you tell me why you changed it?

A. Well, as -- as you can imagine I was a bit blind-sided by these questions. I mean, these are things I hadn't thought about in years

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and so I was -- I -- when I went back and read my deposition transcript, I wanted to make sure that I was giving -- that I had given clear and complete and truthful answers. I mean I was dumbfounded when -- when these -- these questions which were not something I had anticipated or as -- as -- as I indicated even thought about in many years were -- were posed to me. So there was a little confusion on my part. Even afterwards there was a little confusion on my part as to exactly what I had said. So I wanted to set the record straight and make sure that there was -- there was clarity with respect to the record in -- in that case.

Q. Okay. And looking in particular at the -- at the change that you made to your original answer at Page 126, Lines 18 to 23, your original testimony was at your deposition:

[redacted]

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[redacted]

JOHN A. KILPATRICK

[redacted]

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[redacted]

MR. HOLLEY: That's all the questions I have. Pass the witness.

THE WITNESS: Thank you.

MR. RAND: Deposition closed. Thank you.

THE VIDEO TECHNICIAN: All right then.

MR. RAND: Well, I should ask. Simpson has no questions I

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assume, RBS?

MR. ROBINSON: That's right, no questions.

MR. RAND: Very good. I -- I neglected to ask yesterday. I'm sorry. Very good.

Deposition closed.

THE VIDEO TECHNICIAN: All right then. We are going off the record. The time is 11:16 a.m.

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(Time noted: 11:17 A.M.)